

disorders and epilepsy results in major long-term personal, family, and social consequences. Mortality rates of pediatric arterial ischemic stroke (AIS) ranges from 10%–20% and may be higher in recurrent stroke. The aim of the study is to evaluate sensorimotor outcome of children with AIS and explore predictive factors that affect poor outcome.

Patients and method: Fifty patients (25 males, 25 females) aged between 1 month and 17 years who were treated at M. Iashvili Children's Central Hospital, with the onset of stroke after 2009 were included. Data were collected from hospital records and included demographic and clinical characteristics, neurological impairments at onset, affected arteries, vascular distribution areas involved, possible causes and risk factors for stroke, presence of stroke recurrence, and status at discharge. Neurologic deficit severity based on the scores of the Pediatric Stroke Outcome Measure (PSOM) was assigned for each of the following spheres: right sensorimotor and left sensorimotor (both including visual, hearing, motor, and somatosensory function); language production; language comprehension; cognitive performance; and behavioural performance.

Results: According to PSOM scores, neurological outcome was favourable in 50% of patients (20 without mild neurological deficits and five with mild neurological deficits), and unfavourable in 50% with moderate to severe deficits.

Conclusion: The reported outcome after childhood stroke was variable with long-term neurological deficits or disability in half of the patients. Outcome was worse in patients with younger ages at stroke; stroke size and combined cortical and subcortical involvement was associated with poor outcome.

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Effects of clinical and environmental factors on the health-related quality of life of children with spina bifida

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Introduction: To assess the effect of medical and environmental factors on the health-related quality of life (HRQoL) of children with spina bifida (SB).

Patients and method: This is a cross-sectional study of a nationally representative sample of 94 children with spina bifida aged 5 to 18 years. The main instruments used were the Spina Bifida Health-Related Quality of Life instrument and the Participation and Environment Measure for Children and Youth (PEM-CY). The instruments were translated according to international guidelines. Symptoms and impairment caused by spina bifida were obtained from the medical files and the clinical examination.

Results: The HRQoL scores were related to level of lesion ($\chi^2=32.957$, $p=0.0001$), ambulation ($\chi^2=32.4$, $p=0.0001$), hydrocephalus ($\chi^2=4.04$, $p=0.0001$), incontinence ($z=-5.37$, $p=0.0001$), and mental abilities ($\chi^2=36.6$, $p=0.0001$). Spearman's correlation indicated moderate ($0.5 \leq r_s < 0.7$) positive relationships between HRQoL and overall home environmental supports, school environmental resources, overall school environmental supports, community environmental

helpfulness, community environmental resources, and overall community environmental supports. A multivariate linear regression revealed that level of lesion ($\beta=3.558$; $p=0.0001$), urinary incontinence ($\beta=-3.214$; $p=0.0001$), overall community environmental supports ($\beta=0.266$; $p=0.01$), and overall school environmental supports ($\beta=0.082$; $p=0.01$) were the most significant predictors of HRQoL.

Conclusion: Our findings confirm the results of studies which dispute a linear inverse association between condition severity and HRQoL and emphasize the importance of environmental modifications for HRQoL of children with spina bifida.

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Early therapy in perinatal stroke: pilot feasibility trial

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Introduction: Perinatal stroke affects around 1 in 3500 infants and frequently leads to unilateral cerebral palsy. Early intervention could improve motor outcomes. The aim of our study was to test feasibility and acceptability of an early Therapy in Perinatal Stroke intervention (eTIPS).

Patients and method: This pilot feasibility trial (ISRCTN12547427) took place in North-East England, UK, August 2015–September 2017. The participants were infants with unilateral perinatal stroke or haemorrhagic parenchymal infarction (HPI) and their parents and therapists. The intervention was a parent-delivered lateralised therapy approach in the first 6 months of life. Outcome measures were feasibility (recruitment and retention rates for perinatal stroke infants) and acceptability (parental questionnaires, qualitative observations, and in-depth interviews with parents and therapists). We also reviewed clinical imaging data; undertook clinical, research, and exploratory assessments of motor function; and implemented a questionnaire assessment of parental cognitive wellbeing.

Results: Within 18 months we screened 20 infants referred as perinatal stroke/HPI; of these, 14 met the inclusion criteria and 13 undertook the study. One additional patient declined to attend a screening appointment. At 6 months, 11 of those enrolled had completed the final assessment. Parents and therapists valued the intervention, finding it to be acceptable and workable. The Hand Assessment for Infants was well tolerated by infants and highly valued by parents. Completion rates for the Warwick-Edinburgh Mental Wellbeing Scale were high and did not suggest adverse effects on parental cognitive wellbeing. There were no adverse events related to the intervention.

Conclusion: eTIPS was feasible to deliver and acceptable. We plan to investigate efficacy in a multi-centre randomized controlled trial.